

DETAILED ACTION

Election/Restrictions

1. Newly submitted claim 33 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: e.g., method the step of rotating the tool to determine a rotary position relative to the drive shaft.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 33 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the cup spring must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 27-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 27 recites the limitation "chamfers". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 10, 13, 17-20, 22, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raines (5,366,312) and Goris (5,496,316).

Raines discloses (Fig. 1-20) the invention substantially as claimed including a centering element 22 has circular cross-section, a bearing flange (e.g., 14 or 24), a form-locking element/pin-like form (e.g., 84 and 85), a tool (Fig. 7-10), a power tool 10, a drive shaft 12, See

Fig. 12 the radius associated with one position of the form-locking element is more than twice as large as a radius of the centering element, at least one slaving face (the outer surface of the boss), a recess (e.g., 34) with circumferential edge of 360 degrees and a diameter of 4-8 mm (inherently disclosed). Raines discloses the claimed invention except for a radius associated with one position or said form-locking element is four times as large as a radius of said centering element. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing the a radius associated with one position or said form-locking element is eight times as large as a radius of said centering element for the purpose of having a better connection, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum value or workable ranges involves only routine skill in the art. *In re Aller*, 105USPQ 233.

Raines discloses the invention substantially as claimed except for at least twelve form-locking elements. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing at least twelve form-locking elements for the purpose of increasing the degree of freedom of the blade, since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Raines discloses the invention substantially as claimed except a quadrangular cross section/trapezoidal cross section. However, Goris teaches the use of a locking element 20 having a trapezoidal cross section (see Fig. 7) for the purpose of providing a secure and stable engagement of the blade. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the locking element of Raines by providing the

trapezoidal cross section as taught by Goris in order to obtain a device that provides a secure and stable engagement of the blade.

7. Claims 4-5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raines (5,366,312) in view of Trott (5,729,904).

The modified device of Raines discloses the invention substantially as claimed except for at least three or four rotary positions. However, Trott teaches the use of pins 32 for the purpose of connecting the blade. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing the pins as taught by Trott in order to obtain a device that quickly connects the blade. Trott pins are capable of connecting the blade in at least three or four rotary positions.

8. Claims 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raines (5,366,312) in view of Trott (5,729,904) as set forth in claim 5.

The modified device of Raines discloses the invention substantially as claimed except for at least twelve rotary positions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing at least twelve rotary positions for the purpose of increasing the degree of freedom of the blade, since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. The locking element of Raines are capable of operate with tools having triple symmetry and a quadruple symmetry by locating the circular locking element resting in the side walls.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raines (5,366,312) in view of Hutchins et al. (5,694,693).

The modified device of Raines discloses the invention substantially as claimed except for at least one chamfer. However, Hutchins et al. teaches the use of at least one chamfer (see Fig. 5-6) for the purpose of easily securing the blade. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing at least one chamfer as taught by Hutchins et al. in order to obtain a device that easily secures the blade.

10. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raines (5,366,312) in view of Jasch (6,796,888 B2).

The modified device of Raines discloses the invention substantially as claimed except for a spring element. However, Jasch teaches the use of a spring element 98 for the purpose of preventing a release of the screw in operation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing the spring element as taught by Jasch in order to obtain a device that prevents a release of the screw in operation.

11. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raines (5,366,312) as applied to claim 6 above.

The modified device of Raines discloses the claimed invention except for twelve rotary positions differ from each of their adjacent rotary positions by 30°. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing the twelve rotary positions differ from each of their adjacent

rotary positions by 30°, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum value or workable ranges involves only routine skill in the art. *In re Aller*, 105USPQ 233.

12. Claims 27-29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raines (5,366,312) in view of Jasch (6,796,888 B2), Goris (5,496,316) and Hutchins et al. (5,694,693).

Raines discloses the invention substantially as claimed including a centering element/fastening screw 22, a bearing flange (e.g., 14 or 24), at least one form-locking element (for example, 84 and 85), a tool (Fig. 7-10), a power tool 10 and a drive shaft 12. Raines doesn't show at least twelve rotary positions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing at least twelve rotary positions for the purpose of increasing the degree of freedom of the blade, since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. The locking element of Raines are capable of operate with tools having triple symmetry and a quadruple symmetry by locating the circular locking element resting in the side walls. Also, Raines discloses the claimed invention except for a radius associated with one position or said form-locking element is four times as large as a radius of said centering element. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing the a radius associated with one position or said form-locking element is eight times as large as a radius of said centering element for the purpose of having a better connection, since it has been held that where the general conditions of a claim are disclosed in the prior art,

discovering the optimum value or workable ranges involves only routine skill in the art. *In re Aller*, 105USPQ 233.

Raines discloses the invention substantially as claimed except for a spring element. However, Jasch teaches the use of a spring element 98 for the purpose of preventing a release of the screw in operation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing the spring element as taught by Jasch in order to obtain a device that prevents a release of the screw in operation. The spring is capable of deflecting the tool past the chamfers. The spring element has a shape like a cup spring (see Fig. 16).

Raines discloses the invention substantially as claimed except a trapezoidal cross section. However, Goris teaches the use of a locking element 20 having a trapezoidal cross section (see Fig. 7) for the purpose of providing a secure and stable engagement of the blade. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the locking element of Raines by providing the trapezoidal cross section as taught by Goris in order to obtain a device that provides a secure and stable engagement of the blade.

Raines discloses the invention substantially as claimed except for chamfers. However, Hutchins et al. teaches the use of chamfers (see Fig. 5-6) for the purpose of easily securing the blade. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing chamfers as taught by Hutchins et al. in order to obtain a device that easily secures the blade.

13. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raines (5,366,312) in view of Arnegger (4,252,121) and Goris (5,496,316).

Raines discloses the invention substantially as claimed including a centering element 22, form-locking elements (for example, 84 and 85), a tool (Fig. 7-10), a power tool 10 and a drive shaft 12. Raines doesn't show an inclined section. However, Arnegger teaches the use of a locking element 51 having an inclined section 52 (see Fig. 5) for the purpose of allowing certain cases a better accessibility to perform the cutting operation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the locking element of Raines by providing the inclined section as taught by Arnegger in order to obtain a device that allows certain cases a better accessibility to perform the cutting operation.

Raines discloses the invention substantially as claimed except a quadrangular cross section/trapezoidal cross section. However, Goris teaches the use of a locking element 20 having a trapezoidal cross section (see Fig. 7) for the purpose of providing a secure and stable engagement of the blade. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the locking element of Raines by providing the trapezoidal cross section as taught by Goris in order to obtain a device that provides a secure and stable engagement of the blade.

14. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raines (5,366,312) in view of Arnegger (4,252,121) and Goris (5,496,316) as applied to claim 30 above, and further in view of Jasch (6,796,888 B2).

The modified device of Raines discloses the invention substantially as claimed except for a spring element. However, Jasch teaches the use of a spring element 98 for the purpose of preventing a release of the screw in operation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Raines by providing the spring element as taught by Jasch in order to obtain a device that prevents a release of the screw in operation.

Response to Arguments

15. Applicant's arguments have been fully considered but they are not persuasive. Applicant argues that Reines doesn't disclose one slaving face, twelve form-locking elements which are distributed uniformly over an angular range and a trapezoidal cross section. First, Reines teaches slaving faces which are the outer surfaces of the bosses (e.g., 84 and 85). Second, Reines teaches at least one embodiment with elements which are distributed uniformly over an angular range (see Fig. 11-12). And last, the trapezoidal cross section limitation is disclosed by Goris's prior art. Regarding using twelve form-locking elements, the Examiner maintains the position that discovering the optimum value or workable ranges involves only routine skill in the art. Regarding Applicant's arguments of the V-shaped cut out of Goris, there is limitation that prohibit the use of V-shaped cut out for that reason the combination is proper.

16. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., adjusting the rotary position by moving the tool against the spring force of the spring element) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Flores-Sánchez whose telephone number is 571-272-4507. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/O. F./
Examiner, Art Unit 3724
4/10/2010

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